

and it is at least very probable, geologists may still speculate on two modes in which the mass of the island acquired its present form and elevation above the sea. 1st. The advocates of Von Buch's crater-of-elevation hypothesis may imagine that a succession of horizontally super-imposed beds were upheaved by a sudden movement, and tilted so as to dip in all directions outwards from the centre of a new dome-shaped eminence, in the middle of which a large opening or bowl-shaped cavity was produced. 2dly. Or according to the theory which to me appears preferable, a submarine hill in the form of a flattened dome may have gradually accumulated, partly below the waters and partly above, by the continued outpouring of sheets of lava and the ejection of ashes from a central orifice. In this case the dikes would represent the fissures, which were filled during successive eruptions, and the original inclination of the beds may have been increased by the distension and upheaval of the mass during reiterated convulsions, acting most forcibly at or near the channel of discharge, which would become partially sealed up with lava from time to time, and then be burst open again during eruptions. At length the whole island may have been raised bodily out of the sea by a gradual upward movement.

Whatever theory we adopt, we must always explain the abrupt termination of the dikes and layers of trachyte and basalt in the steep walls of the escarpments surrounding the great crater by supposing the removal of part of the materials once prolonged farther inward toward the centre. If according to the elevation-crater hypothesis, a series of sheets of lava and ashes originally spread over a level and even surface have been violently broken and uplifted, why do not the opposite walls of the chasm correspond in such a manner as to imply by their present outline that they were formerly united? It is evident that the precipices on opposite sides of the crateriform hollow would not fit if brought together, there being no projecting masses in one wall to enter into indentations in the other, as would happen with the sides of many mineral veins, trap-dikes, and faults, could we extract the intrusive matter now separating them, and reunite the rocks which have been fractured and disjoined.

The highest crater of the peak has merely disengaged sulphureous vapours ever since it has been known to Europeans; but an eruption happened in June, 1798, not far from the summit, and others are recorded, which poured out streams of lava from great heights, besides many which have broken out nearer the level of the sea. All these, however, seem to be dependent on one great centre of eruption, or on that open channel communicating between the interior of the earth and the atmosphere, which terminates in the highest crater of the peak.

We may consider Teneriffe, then, as having been from a remote period the principal and habitual vent of the volcanic archipelago of the Canaries. The discharges which have taken place in the contiguous isles of Palma, Lancerote, and the rest, may be of a subsidiary kind, and have probably been most frequent and violent when the